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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,032	09/21/2001	Masayoshi Shimizu	826.1751	4255
21171	7590	09/30/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EDWARDS, PATRICK L	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/957,032

Applicant(s)

SHIMIZU, MASAYOSHI

Examiner

Patrick L. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 and 27-35 is/are pending in the application.
- 4a) Of the above claim(s) 2-13, 16, 20-24 and 27-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 14, 15, 17-19 and 32-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04-27-2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. The response received on 07-08-2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

#### ***Response to Arguments***

2. The arguments filed on 07-08-2005 have been fully considered. A response to these arguments is provided below.

### **Drawing Objections**

#### **Summary of Argument:**

Applicant has submitted replacement drawings sheets which now include the identifier –prior art--

#### **Examiner's Response:**

The previous objections to the drawings are hereby withdrawn.

### **35 USC 112, Second Paragraph Rejections**

#### **Summary of Argument:**

Applicant has amended the claims with the intention of correcting the 35 USC 112(2) rejections set forth in the previous office action. Applicant alleges that the newly amended claims satisfy the requirements of the statute.

#### **Examiner's Response:**

The examiner disagrees. Applicant's amendment has corrected all of the previous 112(2) problems, except one. The remaining 112(2) problem—which can be easily corrected—will be repeated in the below rejection. However, Applicant's amendment has spawned other 112(2) problems, which will be addressed in the below rejection.

### **Double Patenting**

#### **Summary of Argument:**

In the previous office action, the examiner raised a double patenting issue with respect to claims 17, 19, 25, and 26.

#### **Examiner's Response:**

Applicant has cancelled claims 25 and 26, thus obviating the potential double patenting issue.

### **Prior Art Rejections**

#### **Summary of Argument:**

Applicant alleges that the claims are allowable over the Winkelman reference and the Winkelman reference in combination with Kinjo and Katajamaki

#### **Examiner's Response:**

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Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

*Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 14, 15, 17-19, and 32-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

All of these claims contain the either the phrase "character area" or "character region." This term is not supported by the original disclosure. Indeed, it does not appear as if the word "character" was in the original disclosure. Thus, the phrases "character area" or "character region" were not described in the original disclosure such that one skilled in the art would recognize that the inventor had possession of the claimed invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 14, 15, 17-19, and 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 15, 19, 26 and 34, these claims all make reference to a plurality of computed statistic amounts with lack antecedent basis in the claim. For example, claim 15 refers to the "statistic amounts", but the claim only recites computing a singular "statistic amount". This problem can be easily corrected by amending the phrase "statistic amounts" to --statistic amount--

Regarding claims 1, 14, 15, 17-19, and 32-35, the metes and bounds of the term "character area" or "character region" are not clear as recited in the claim. This term does not appear to be in accord with the specification (see the above 112(1) rejection). It follows that it is difficult to ascertain an unambiguous definition of the phrase. For examination purposes this indefinite and unsupported term will be given its broadest reasonable interpretation.

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*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 14, 17, 32-33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Winkelman (USPN 5,748,802).

With regard to claim 1, Winkelman discloses dividing an image into a plurality of character areas (col. 3 lines 12-13: The sub-images disclosed in Winkelman are analogous to character areas recited in the claim because each sub-image has a characteristic property that defines the nature of the sub-image.).

Winkelman further discloses computing a characteristic amount for each of the plurality of areas (col. 11 lines 15-23). Per the applicant's specification (see paragraph 88 et al), the mean value of a sub-image as disclosed in Winkelman qualifies as the "characteristic amount" recited in the claim.

Winkelman further discloses computing a statistic amount for estimation of the status of the image using the characteristic amount (col. 11 lines 25-38: Per the applicant's specification (see, *inter alia*, paragraph [0089]), the standard deviation (or scatter) disclosed in Winkelman qualifies as the "statistic amount" recited in the claim.). Winkelman further discloses that the computed standard deviation is used in the estimation of the tone level of the image (col. 12 line 45 – col. 13 line 5: The reference describes how the standard deviation is used to help calculate histograms—which are tone level estimates.).

With regard to claim 14—which is representative of claim 35—Winkelman further discloses comparing the computed statistic amount with a predetermined value (col. 12 lines 45-62: The scatter threshold SwsDev disclosed in Winkelman is analogous to the predetermined value recited in the claim.).

Winkelman further discloses determining a correcting parameter based on the comparison result (col. 13 lines 1-41). The results of the above comparison determine which sub-image histograms are utilized in the calculation of the aggregate histogram. The aggregate histogram is employed in the calculation of the correction curve (col. 13 lines 39-41). Therefore, this aggregate histogram qualifies as the claimed correcting parameter and we can consequently conclude that the determination of a correcting parameter is based on the aforesaid comparison.

Winkelman further discloses using this corrected parameter to correct the original image (col. 15 lines 7-14).

With regard to claim 17, Winkelman discloses an apparatus for performing the method of claim 15 (see winkelman figure 1).

With regard to claims 32 and 33, a computer-readable recording medium that stores a program which causes the computer to execute the steps of claims 1 and 14 is essential if the image processing method disclosed in Winkelman is to function. Therefore, a computer-readable recording medium is inherent in the Winkelman disclosure.

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*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winkelman as applied to claim 17 above, and further in view of Kinjo et al. (USPN 6,631,208). The arguments as to the relevance of Winkelman as applied above are incorporated herein.

With regard to claim 18, Winkelman discloses that the statistic amount is computed based on the characteristic amount, but fails to expressly disclose that this computation also involves a weight coefficient which corresponds to each area.

Kinjo, however, discloses calculating a statistic amount using both a characteristic amount (Kinjo col. 17 line 60 – col. 18 line 3) and a weight coefficient (Kinjo col. 17 lines 42-46) corresponding to each image area. The fourth mark disclosed in Kinjo is analogous to the “characteristic amount” recited in the claim. Further, the “fifth mark” disclosed in Kinjo is analogous to the weight coefficient recited in the claim.

Kinjo further discloses determining an average value of two marks (Kinjo col. 18 lines 20-44). This average value is analogous to the claimed “statistic amount”.

It would have been obvious to one reasonably skilled in the art at the time of the invention to modify Winkelman’s image status estimation method by using both a characteristic amount and a weight coefficient as taught by Kinjo. Such a modification would have allowed for a method which had additional criteria for determining discoloration regions of an image (Kinjo col. 18 lines 14-20).

10. Claims 15, 19, and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Winkelman as applied above, and further in view of Katajamaki et al. (“Image Dependent Gamma Selection Based on Color Palette Equalization and a Simple Lightness Model”). The arguments as to the relevance of Winkelman as applied above are incorporated herein.

With regard to claim 15, Winkelman discloses using a correcting parameter to generate a corrected image. Winkelman further discloses determining a correcting parameter by comparing a computed statistic amount with a predetermined value. Winkelman fails to expressly disclose correcting the original image using a plurality of different correcting parameters to generate a plurality of corrected images. It follows that Winkelman also fails to expressly disclose determining that the correction result is the corrected image obtained using the correcting parameter corresponding to the statistic amount closest to a predetermined value.

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Katajamaki, on the other hand, discloses generating a plurality of corrected images by correcting an original image using a plurality of different correcting parameters (Katajamaki pg. 303: The reference describes using different values of a variable 'f' (i.e. a plurality of different correcting parameters) to generate a plurality of corrected images from an original image).

Katajamaki further discloses defining a corrected image obtained using a correcting parameter (in this case the optimal value (or correcting parameter) was 12) corresponding to a statistic amount closest to a predetermined value among the computed statistic amounts as an appropriate corrected image (Katajamaki pg. 303: again, the reference describes determining the parameter which produces the optimum result (i.e. defining a corrected image) by minimizing a root mean square error value (i.e. the computed statistic amount which was closest to a predetermined value for the statistic amount)).

It would have been obvious to one reasonably skilled in the art at the time of the invention to modify Winkelman's image correcting method by generating a plural corrected images from plural correcting parameters and then determining the appropriate parameter and corresponding image by minimizing some predetermined error index as taught by Katajani. Such a modification would have allowed for an iterative image correction algorithm well suited for computer processing. It also would have allowed for the option of using a reference image in the image correction process as an ideal image with which corrected images could be compared to.

With regard to claim 19, Winkelman discloses an apparatus for performing the method of claim 15 (see Winkelman figure 1).

With regard to claim 34, a computer-readable recording medium that stores a program which causes the computer to execute the steps of claims 1 and 14 is essential if the image processing method disclosed in Winkelman is to function. Therefore, a computer-readable recording medium is inherent in the Winkelman disclosure.

### *Conclusion*

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (571) 272-7390. The examiner can normally be reached on 8:30am - 5:00pm M-F.

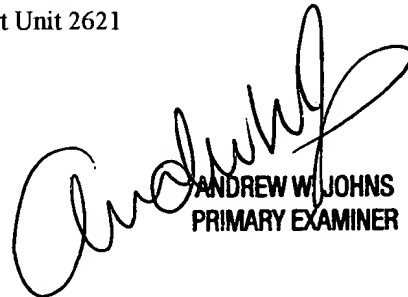
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick L Edwards

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ANDREW W. JOHNS  
PRIMARY EXAMINER